

APPENDIX

MARKED-UP VERSION TO SHOW CHANGES

IN THE CLAIMS:

The claims are amended as follows.

1. (2 x Amended) A method to inhibit expression of a target gene in a cell comprising introduction of a ribonucleic acid (RNA) into the cell in an amount sufficient to inhibit expression of the target gene, wherein the RNA comprises a double-stranded structure having a first ribonucleotide [with an identical nucleotide] sequence comprising at least 25 bases which correspond to a nucleotide sequence [as compared to a portion] of the target gene [of at least 25 bases in length] and a second ribonucleotide sequence comprising at least 25 bases which are complementary to the nucleotide sequence of the target gene, the first and the second ribonucleotide sequences stably anneal to each other to form the double-stranded structure, and the cell is susceptible to RNA interference.

10. (Amended) The method of claim 1 in which the first and the second ribonucleotide [identical nucleotide] sequences comprise [is] at least 50 bases which correspond to or are complementary to the nucleotide sequence of the target gene [in length].

22. (2 x Amended) A method to inhibit expression of a target gene comprising:

- (a) providing an organism containing a target cell, wherein the target cell contains the target gene and the target cell is susceptible to RNA interference, and the target gene is expressed in the target cell;
- (b) contacting a ribonucleic acid (RNA) with the organism, wherein the RNA is comprised of a double-stranded structure with duplexed ribonucleic acid strands of at least 25 bases in length and [one of the] those ribonucleic acid strands are each [is] able to specifically



hybridize to [duplex with a portion of] the target gene over the [of] at least 25 bases [in length]; and

- (c) introducing the RNA into the target cell, thereby inhibiting expression of the target gene.

28. (Amended) The method of claim 22 in which the duplexed ribonucleic acid strands are [identical nucleotide sequence is] at least 50 bases [nucleotides] in length and each of the ribonucleic acid strands is able to specifically hybridize to a deoxyribonucleic acid strand of the target gene over the at least 50 bases.

32. (Amended) The method of claim 22 in which the organism is contacted with the RNA by feeding [the organism] food containing the RNA to the organism.

33. (Amended) The method of claim 32 in which the food comprises a genetically-engineered host transcribing the RNA [comprises the food].

35. (Amended) The method of claim 34 [22] in which the organism is a nematode and the expression construct is contained in a plant, and disease associated with nematode infection of the plant is thereby reduced.

39. (2 x Amended) A kit comprising reagents for inhibiting expression of a target gene in a cell,

wherein said kit comprises (a) means for introduction of a ribonucleic acid (RNA) into the cell in an amount sufficient to inhibit expression of the target gene, and (b) the RNA;

wherein the RNA comprises [has] a double-stranded structure with a first ribonucleotide sequence comprising at least 25 bases which correspond to a [an identical] nucleotide sequence [as compared to a portion] of the target gene [of at least 25 bases in length] and a second ribonucleotide sequence comprising at least 25 bases which are complementary to the nucleotide sequence of the target gene, the first and the second ribonucleotide sequences stably anneal to each other to form the double-stranded structure, and the cell is susceptible to RNA interference.

40. (Amended) A method to inhibit expression of a target gene in a cell of an invertebrate animal comprising introduction of a ribonucleic acid (RNA) into the cell in an amount sufficient to inhibit expression of the target gene, wherein the RNA comprises a double-stranded structure having a first ribonucleotide [with an identical nucleotide] sequence comprising at least 25 bases which correspond to a nucleotide sequence [as compared to a portion] of the target gene [of at least 25 bases in length] and a second ribonucleotide sequence comprising at least 25 bases which are complementary to the nucleotide sequence of the target gene, the first and the second ribonucleotide sequences stably anneal to each other to form the double-stranded structure, and the cell is susceptible to RNA interference.

41. (Amended) A method to inhibit expression of a target gene in a cell comprising introduction of a ribonucleic acid (RNA) into the cell in an amount sufficient to inhibit expression of the target gene, wherein the RNA is consisting essentially [comprised] of a double-stranded structure with duplexed ribonucleic acid strands and one of the strands is able to specifically hybridize in the cell to an RNA transcript from the target gene, the first and the second ribonucleotide sequences stably anneal to each other to form the double-stranded structure, and the cell is susceptible to RNA interference.

42. (Amended) A method to inhibit expression of a target gene comprising: providing an organism which is a plant or an animal, wherein the target gene is expressed in the organism; introducing an expression construct into the organism to produce a transgenic organism, wherein the expression construct produces a ribonucleic acid (RNA) comprised of a double-stranded structure with duplexed ribonucleic acid strands and one of the strands is able to specifically hybridize with a transcript [transcribed portion] of the target gene, and the transgenic organism is susceptible to RNA interference; and producing the RNA in the transgenic organism in an amount sufficient to inhibit expression of the target gene.

Claims 43-46 are added as new claims.

